

## Fifth-Grade Instrumentalists' Descriptions of Music

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### Abstract

*The purpose of this study was to investigate how elementary-aged students with instrumental experience listen to unfamiliar music. My two research questions were: how do elementary instrumentalists categorize unfamiliar music? and, how much attention do students give discrete musical elements (e.g. tempo, instrumentation, and dynamics) as compared to global musical characteristics (e.g. style, genre, and affect) when describing music?*

*The participants were fifth-grade students who had played in the school band or orchestra for at least one year. After listening to fifteen short musical examples, the participants wrote descriptions of the music, sorted the examples into groups, and explained their sorting strategies. Four categories of descriptors emerged: Elemental Music Descriptors, Extramusical Associative Descriptors, Affective Descriptors, and Other Descriptors. The participants used elemental musical terms most often, yet also included a substantial number of extramusical associations and affective descriptors. The extramusical associations were often based on personal experiences particular to each participant and encompassed four recurring sub-themes common to many of the participants.*

*Implications of this study for future research include evaluating how students actually listen to music, using their own words, to provide a more complete understanding of their musical experiences. Instead of teaching music analytically and piecemeal, music educators could honor all the categories of responses children have to music. Music listening instruction could facilitate more meaningful listening experiences in the classroom by adapting music instruction to involve associative and affective responses along with elemental musical descriptors. Instead of exercises in repeating memorized musical terms, music listening experiences may be investigated as opportunities for creative and critical thought.*

### Introduction

What do we hear when we listen to music? Considering the various components of music from around the world, many elements may shape our listening experience. For example, listeners may attend to the music's tempo noticing its speed, they may notice the timbre of the sound and imagine what instrument is playing, or they may instead listen for the overall style of the music. In fact, listeners may notice any number of musical elements. The way listeners attend to the music frames their experience of the music and their understanding of the piece. Cognitive studies have focused on verbally-based knowledge about music instead of on the musical experience itself (Cutietta & Taetle, 2002), and understanding how students listen to music is an important area of research in music education (Fiske, 1997). Relevant questions about listeners' experience include: what do listeners attend to while listening to music? do they focus on the same or different things? and how is their focus of attention associated with the meaning they attach to music?

In established music education research, it is assumed that students attend to musical elements such as tempo, rhythm, and dynamics when listening to unfamiliar music (Cutietta & Taetle, 2002). Educators traditionally explain music in an analytical fashion, talking about discrete musical elements, most often using words. Words, however, may not be the most effective means nor are they the only means researchers have to investigate musical understanding. Furthermore, discrete musical elements may be

mental constructs used to explain how we understand music only in retrospect, not in the moment. These elements may be abstractions, labeled in language that can only describe music clinically after the listening experience, post-mortem. As the well-known trumpeter Miles Davis (1963) once commented, "I'll play it first and tell you what it is later."

The rationale for this study was similar to that cited by Rodriguez and Webster (1997) in their investigation of elementary students' verbal responses to a piece of classical music. By asking students a series of four questions to encourage interpretive responses, the authors investigated the nature of students' verbal responses. Rodriguez and Webster found that fifth-grade students expressed their affective responses less concretely than younger students. The authors asserted that the fifth-grade students demonstrated, "an emerging realization that the feelings evoked in musical experiences are not simply 'happy' or 'sad' or even both, but increasingly beyond the realm of discourse" (p. 24). As Richardson and Whitaker (1992) reported, there is a need to embrace the affective as well as the cognitive components when listening to music in order to represent the whole of the student's listening experience. Studies based solely on verbal descriptors such as Rodriguez and Webster's 1997 investigation of children's verbal interpretive responses to music listening may overlook important affective responses.

In this study, I investigated what elementary-aged students attend to when listening to unfamiliar music by studying their descriptions and categorizations of musical examples. Specifically, I examined students' written descriptors of musical examples, groupings the students made as they sorted the musical examples, observations I made during the sorting task, and interviews immediately following the sorting task to inquire into what criteria informs students' categorization of music. My research questions were: how do elementary instrumentalists categorize unfamiliar music? and, how much attention do students give discrete musical elements (e.g. tempo, instrumentation, and dynamics) as compared to global musical characteristics (e.g. style, genre, and affect) when describing music?

### Theoretical Framework

The conceptual framework of this study included reflective thinking and constructivism. As defined by Dewey (1933), reflective thinking is based on a fund of experiences providing a basis of prior academic knowledge, practical experience, affective reactions, and imagination. The listener may gain another perspective on the same music by thinking from such a position, informed by these reflections. Using a constructivist approach, Bamberger suggested that understanding music and learning music are both acts of perceptual problem-solving (1972 & 1982). Particularly in listening tasks, Bamberger (1991) stated that people organize sound as it is occurring and engage in a meta-cognitive process, termed "reflection-in-action," by alternatively considering their reflections of an experience in drawings or words and remembering the listening experience itself.

In the framework for this study, I considered what facets of music are in fact informing the participants as they listen to music. Perhaps the participants respond in ways related to their musical experiences, suggesting that aspects such as style are more important in the participants' minds than the component elements of music, such as tempo, instrumentation, and dynamics. Although musical thought may be inherently different than verbal thought (Cutietta & Thompson, 2000), children's verbal reports after listening to music can reveal how they organize their listening experiences (Rodriguez & Webster, 1997). To account for both these views of describing music with words, the framework for my study included verbal reports as well as written descriptors, and solutions to a nonverbal musical task (i.e. sorting musical examples into groups).

### Literature Review

Several psychological theories of behavior and cognition have influenced music educators' understanding of music listening (Cutietta & Taetle, 2002). While behavioral theories have been useful in terms of delivering instruction to classes, researchers using a constructivist paradigm have proposed models that address the individual's music listening experience. For example, Bamberger (1991) proposed a constructivist approach to children's musical development and models of music learning that attend to the unique nature of the listener's musical experience and perception as related to cognition. She investigated the development of musical intuition by analyzing figural and formal representations of music. While Bamberger's work included musical notation systems and developmental models, I limited my investigation to fifth-grade students listening to and sorting musical examples.

In a developmental study, Rodriguez and Webster (1997) used one ten-measure excerpt from Hindemith's "Mathis Der Mahler" as the musical example to investigate the responses of thirty-three students from kindergarten to grade five. The authors found that verbal reports provided a window into the world of the participants' experiences of music listening. By asking participants to describe their experience, researchers could extract the most salient and pertinent details from their experience, suggesting that verbal data may be a valid means of explaining a participant's musical experience. Rodriguez and Webster found a trend suggesting that the responses of fourth and fifth-graders were more global and reflective of emotional experiences than the responses of younger students. While their study was developmental in nature with one specific musical example, the current study employed a wide variety of musical examples with subjects of the same developmental level.

Conversely, Cutietta and Thompson (2000) investigated the effect of participation general music classes and private instrumental instruction on fifth- and sixth-grade students' descriptions of an excerpt from the third movement Mozart's "Symphony No. 38." The authors found that the students' musical responses fell into five categories: dynamics, tempo, pitch, instrumentation, and texture or flow. Every student made affective references as well as analogies and metaphors, termed "nonmusical responses" by the authors, while usually only two or three of the five musical categories were mentioned by the participants. The authors found that music instruction was associated with a difference in textural responses, related to the flow of the music. Cutietta and Thompson questioned the accuracy of verbal descriptors and found that they were an incomplete measure of children's musical understanding; instead the authors advocated a more participatory approach to music instruction. In this study, I acknowledge the limitations in using verbal reports to describe music; I also augmented my investigation with a musical sorting task that actively involved the participants.

Radocy (1990) researched fourth-grade, seventh-grade, and high school students' immediate reactions to musical excerpts and found three major categories of responses: musical classifications, extramusical associations, and likes or dislikes. He found that fourth-grade students attended to tonal (musical) properties, while the seventh-grade students made value judgments, and the high school students made more balanced observations. Radocy also found that with increasing age, the subjects tended to use more global characterizations and fewer detail-oriented descriptors of the music. While Radocy's study is related to my investigation, students were not required to sort musical examples and were given no opportunity to reflect on their listening experiences in Radocy's investigation.

Similarly, Flowers (1984) studied the responses of children and untrained adults to eight selections of piano music by Kabalevsky, Villa Lobos, and Khatchaturian. She found a hierarchy of verbal descriptors: extramusical, timbre, tempo, and dynamics. Flowers reported that listeners most often use analogies or descriptors that are not inherently musical such as "snakes and lizards" to describe violins playing descending

minor seconds. Reviewing this study, Flowers (1990) asserted that children naturally use extramusical analogies and images to describe music and therefore suggested that such descriptors are effective ways of focusing their attention during listening. While my study considered similar factors, I did not propose a hierarchy, and I focused on participants' responses qualitatively.

### Setting/Context

The setting of this study was Park Side School (all names used in this study are pseudonyms), a public K-5 school in the southwestern United States. There, approximately 350 children enrolled at the school attended two half-hour general music classes per week. The participants in the study were members of either the orchestra or band and had played an instrument for at least one year; many of them had several years' experience and some played more than one instrument. The participants attended a before-school band or orchestra rehearsal twice a week and rented their instruments, suggesting their families had the financial means necessary to provide transportation to and from school as well as to rent musical instruments.

I consulted with Mr. Rothman, one of the fifth grade teachers, to find candidates for this study. He and I made a list of those students who had participated in band or orchestra for at least a year. As one of the classroom music teachers, I relied on my experience of the children in the weekly general music class as I engaged in purposeful sampling (Maxwell, 1996) to limit the selection of students to those who would be likely to respond positively in an interview situation. The resulting group of eight participants was small enough fit the scope of this study, yet large enough to provide a variety of data.

### Participants

The participants were fifth-grade students who were willing to participate in the study and who had played a musical instrument for at least one year. The eight participants in this study included Caucasian, Asian, and Hispanic ethnicities as well as male and female genders. They all played in either the school band or school orchestra, and all the participants had at least a year of instrumental music experience. These participants had all received nearly five years of public school general music education, as well as specific instrumental instruction for a year or more. See Table 1 for a summary of participants' instrumental experience.

**Table 1.**  
**Summary of Participants' Instrumental Experience**

Participant	Instrument(s)	Year(s) of Experience
Abby	Clarinet	Two
Bethany	Violin	Three
Carl	Trumpet	Two
	Organ	Three
Diego	Trumpet	One
Emily	Violin	Two
Fran	Clarinet	Two
	Violin	Three
	Piano	Five
Gill	Viola	One
Haleigh	Clarinet	Two

### Data Collection

To address my first research question (How do elementary instrumentalists categorize unfamiliar music?), I worked with each participant individually. I demonstrated how to use a laptop computer to play musical examples by clicking on one cell of a practice listening matrix. Each cell was numbered and linked to an audio file that played one of the musical examples. The practice examples I used included "Jupiter" from Holst's *The Planets Suite*, "Listen to Your Heart" from Little Feat's *Let It Roll* CD, and Vollenweider's "The Years in the Forest" on his *Eolian Minstrel* CD. I played one of the practice examples and demonstrated how I would write or draw something to remember how the music went. I then asked the participant if he or she understood the task. If the participant did not understand the task, I repeated the demonstration with another example. Every participant reported they understood the task after one or two demonstrations. I then had the participant listen to each of the fifteen musical examples by clicking on one cell of the three-by-five listening matrix to play the musical examples one at a time. I then instructed the participant to listen to the fifteen examples in any order they chose and to write something about each example on a separate card to help them remember how the music went. After the participant finished listening to all the examples and writing or drawing something to remember the music, I asked the participant to sort the cards into groups. I observed the participants while they performed this task to augment my investigation of the first research question.

To address my second research question (How much attention do students give discrete musical elements as compared to global musical characteristics when describing music?), I interviewed the students immediately after they had completed the sorting task to explore their listening experience. I asked them why they arranged the musical examples the way they chose, what name they would give each group, and what they remembered about the music.

I used musical examples that illustrated a wide variety of tempos (speed), timbres (different instruments), styles (musical period), and dynamics (loud and soft). The music was selected to avoid prior knowledge of specific musical pieces; in almost every case, the participants were unfamiliar with the musical examples. The selected musical examples had no words that the participants could understand to assist the participants in focusing on the music instead of any lyrics. I drew from a variety of sources for the musical examples; songs and chants performed by the Wagogo, Maori, and Tuvian peoples as well as contemporary Western music were included in the fifteen musical examples. Popular selections were also used, including blues, jazz, and bluegrass recordings from a variety of sources. Music from Enya, Billy Joel, Little Feat, Philip Glass, and "Riverdance" was also included as well as several selections from the Medieval, Baroque, Renaissance, twentieth-century, and contemporary eras. Traditional Western art music included Gregorian chant, a Renaissance chanson, a Scarlatti sonata, as well as Stravinsky's "Rite of Spring" and Reich's "Violin Phase." In short, the participants had a smorgasbord of music to sample in this study, providing them ample opportunities to compare, consider, and reflect on the varied nature of their listening experiences.

I collected data using four methods: a musical sorting task, observations during the listening session, an interview immediately following the task, and the students' written descriptors of the music they heard. I conducted the study in a quiet conference room so that I could observe the participants while they listened to the examples, made notes on index cards, and sorted them into groups. I collected additional data through observations of the participants while they performed the listening and sorting task. I then interviewed the participants to understand their thinking and investigate their reasons for sorting the cards as they did. I also collected data from the participants' sorting of the cards (i.e. how many groups, what examples are grouped together, and what illustrations or notes the participant made on the card).



## Observations

The participants were all cooperative and followed instruction for the various tasks. Some of the participants were more animated than others, yet all performed the musical task seriously and thoughtfully. Every participant listened to the examples sequentially, except Bethany, who skipped around the three-by-five matrix of examples but seemed content to search for the matching card. She gazed out of the large second-story window from time to time yet remained focused on the task throughout. One participant, Carl, listened to the musical examples eagerly and chose to listen to them repeatedly. He was thorough, animated, yet methodical; he seemed comfortable in reviewing and sorting the examples after some reflection. Other participants, such as Diego, Fran, and Haleigh, seemed intent and matter-of-fact during the task. They worked quickly, wrote ideas on their cards while the examples were still playing, and paused only occasionally to reflect on the music. Haleigh and Fran went through the music rapidly taking time to hear each example only once. Fran seemed to know what she was listening for and frequently stopped the short excerpts when she had written her succinct description and was ready to go on to the next example. Emily, however, seemed perplexed at times and once asked me how many descriptors she needed to write; I told her as many as she needed to remember how the music went. Finally, Gill asked me to help him write the descriptors for him. He struggled with sorting the musical examples yet completed the task with my assistance.

## Data Analysis

The methodology I used was an adapted Q sort technique as described by Best and Kahn (1998), in which the participants sorted fifteen cards into groups according to how the music sounded to them. I modified the Q sort technique by using musical examples instead of written descriptors, and reduced the number of items from forty or fifty to fifteen, given the age of the participants and the challenge of remembering the musical examples. I also modified the goal of this methodology by assessing participants' grouping strategies instead of determining participants' attitudes. After I began coding the data, I consulted with music professors and graduate students using peer checks to review and revise the data analysis process.

The data collected for this study were in three main forms: categorization of the musical examples into groups, written descriptions of the music, and oral descriptions of the music. The first source of data was the number and method of sorting the music into groups, including the group names. The written descriptions were in the form of words or phrases written by the participant on index cards to which they referred as they sorted the examples into groups. The oral descriptions were taken from interviews with the participants immediately after they had sorted the examples. As a method of investigating the thinking process, I looked for consistency in each participant's grouping, written, and oral data. For each participant, I found that data from different sources were similar to each other. Agreement across data sources provided evidence of triangulation based on multiple data sources.

Additionally, I collected observational data while the participants performed the musical sorting task. These observations gave me a way to describe the participants' listening behavior; I compared their listening strategies with their grouping, written, and oral data as evidence of further congruence or inconsistency among the different data sources.

After scanning the interviews, musical groupings, and written descriptors, I sorted the descriptors into categories based on similarity. Within the categories, I analyzed the data based on themes that emerged within the participants' descriptors (Rossman & Rallis, 1998). After coding the data, I found that the descriptors, responses, and groupings tended to fall into four broad categories: musical, associative, affective, and other.

(See Appendix A for the coding display). The musical descriptors were related to instruments, tempo (speed), volume, melody or pitch, rhythm, and styles. Examples of these descriptors were: "maracas," "long notes," "loud," "high and low," "lots of rests in it," and "jazzy." The associative descriptors were related to objects and experiences that were not musical themselves. Examples of associative themes were: "a train trying to stop" and "war." Affective descriptors were descriptors such as: "scary," "eerie," and "happy." Other descriptors were general terms such as "same" and "different."

## Findings

I found that the students' written, oral, and grouping descriptors constituted four themes: musical, associative, affective, and other descriptors. These four themes indicated the categories the participants used to sort the musical examples, and their descriptors articulated what features of the music captured their attention. Within the associative and musical descriptors, I found several sub-themes which highlighted with more specificity the methods used by the participants to describe the musical examples.

Regarding my first research question concerning how elementary students categorize unfamiliar music, I found that the most commonly used descriptors were musical terms and elements. The participants used these kind of descriptors for almost half of the groupings. These responses indicated simplistic as well as sophisticated terms such as: "brass," "long notes," "singing," "string, instruments and singing," "fast played," "maracas," "two people song," "rest," "fiddle," "round," "drum and violin," "hymn," "woman's voice," "slow, not old," and "many instruments and piano." Genre-based descriptors included: "traditional," "country," "serious," "theme," "foreign," "jazz," "choir," "classical," "indian," "medieval," and "Irish."

Participants also grouped the music according to the extramusical images they associated with what they heard for more than a third of the examples. For example, the participants created these group names associated with their listening experience: "Louisiana trip," "war," "bouncy," "church," "big cities," "an old west town," "different countries," "lullaby," "marching," "African voice," "fiesta," "spiritual dance," "chapel music," "royal," "old days party," "indian ceremony," and "fast movie music."

Affective descriptors were used to categorize the music in only nine instances; these group names reflected their subjective responses including: "scary," "fancy," "serious," "sad," "happy," "relaxing," and "peaceful." Finally, the terms "same" and "different" were used twice by two of the participants to aid in sorting the music.

## Elemental Music Descriptors

Over half the descriptors used by the participants were specifically musical in nature. The musical examples provided the participants with an opportunity to use musical vocabulary to describe and categorize the music. Of the musical descriptors used, most occurred more than once. Perhaps these were from a "bank" of prior knowledge, part of the students' learned music vocabulary. Instrumental descriptors accounted for more than one-third of the musical descriptors; these terms such as "maracas," "violin," and "singing" appeared most salient and readily discernible to the participants. Stylistic terms also accounted for many of the musical descriptors; examples of these responses reiterated genres of music such as "country," "classical," "jazz," and related categories. Frequently found in retail stores, these stylistic descriptions could also be part of the participants' learned vocabulary; perhaps these descriptors were a prescribed way of talking about and classifying music. Other responses described the tempo (speed), rhythm, and melody of the music; these terms were limited to simplistic terms such as "fast," "slow," "beat," "steady," "high," and "low." These descriptors were more seldom used and suggest that the participants paid less attention to these aspects of the music when categorizing and remember the examples. Occasionally, the participants used musical descriptors about the volume of an example; "loud" was


used a few times and suggests that this element of music may have been the least salient to the participants.

To address my last research question concerning how participants' focus of attention is associated with the meaning they attach to music, I examined groups within the musical descriptors. As these data specified discrete musical elements, they formed sub-themes within the musical descriptors. I found that the instrumental descriptors were the most frequently used, accounting for over one-third of the musical descriptors. Examples of this sub-theme were: "banjo," "singing," "maraca," "trumpet," "duet," and "violin." Another category of musical descriptor focused on musical style; the descriptors in this category included: "country," "jazz," "opera," "bluegrass," and "classical." The music's tempo or speed was another sub-theme, in which the participants responded with only variations of "fast/faster," or "slow/slower." The rhythmic component of the music was also a sub-theme, for which the participants responded: "beat," "steady," "upbeat," "quarter notes," and "rests." The music's pitch or melody was another sub-theme to which the participants responded: "high," "low," and "melody." The participants responded to the music's volume with variations on "loud." Finally, the participants indicated their awareness of the musical texture with descriptors such as "background," and "round." The most obvious and numerous musical descriptors referred to instruments, the voice, and singing. The stylistic descriptors were used less often, but more frequently than descriptors of the musical rhythm, tempo, melody, volume, or texture.

Even though I demonstrated an illustration instead of writing words during the practice examples, I found that all but one of the participants chose to use written words to describe their thoughts. Carl made four-line staff notations, which he called "drawings." Examples of these were:

"war, marching"  "long notes" 

"wazzup"  and

"repeat beat, two people in the background" 

Carl's descriptors indicated that he remembered and used learned ways of describing music, an example of what Dewey (1933) termed a "funded experience," even though his familiarity with standard staff notation is still developing. In his written descriptors, he used terms such as "long notes," "repeat beat," and "background," also indicating prior musical knowledge. In addition, Carl revealed several associative connections with the use of extramusical terms such as "war," "marching," and "wazzup" (a reference to a "Mountain Dew" commercial). In these four examples, Carl indicated both musical and extramusical ways of knowing; he chose to express each of these examples in ways he would best remember them.

Even though over half of the participants' responses were specifically musical, they were all verbal. These four staff "drawings" point out a notable exception. Carl was the only participant to use any kind of drawing; this suggests that, to the participants, the musical terms and ways of representing sound may not be as familiar or as natural as illustrations or staff notation, or that they had no need to use illustrations to remember the music. This finding may also be explained by the lack of any structured art education program at Park Side School.

### Extramusical Associations

I found four categories within the associative descriptors suggesting specific types of extramusical associations the participants made with the music. One sub-theme linked music to movie or television as demonstrated by the descriptors: "The Lion King," "an actor in a movie is doing something carefully," "Wazzup," in the Mountain Dew

commercial," and "jazz movie." These descriptors refer to media which correspond to students' listening experiences. The second sub-theme within the associative descriptors referred to religion and spirituality. The participants described some of the music as: "worship," "mourn the dead," "chapel," "priests chant," "hymn," "spiritual," and "from one of the gods." Descriptors in this group may refer to religious ceremonies or the ideas embodied in spiritual services. The third sub-theme related to kinesthetic descriptors, describing the motion that the participants heard in the music. Examples of these descriptors were: "running," "marching," "full of life," "ballroom," "dance," "bouncing up and down," and "it is like a train trying to stop." A fourth sub-theme demonstrated the cultural associations the participants made with the music. Examples of these descriptors were: "Native Americans," "African," "ceremony," "Mexican," "South American," "England," and "another country."

The descriptors that linked music to extramusical images or experiences were used in about one-third of the responses. Examples of these descriptors included: "Alice in Wonderland," "lullaby," "dramatic," "me and my dad," "queens," "Louisiana trip," and "wind." Such descriptors illustrated the connection the participants made to the music from their own lives. I found that most of the associative descriptors occurred only once, as might be expected if these descriptors were specific to the participant's personal extramusical experiences. From "energetic" and "full of life" to "museum" and "wazzup," these descriptors illustrated the wide variety in both the musical examples and the participants' associated experiences.

### Affective Descriptors

Affective descriptors were those terms which named or described a feeling the participants attached to the music. Participants' affective responses were also varied, yet several affective descriptors were repeated by some of the participants. Examples of these descriptors were: "something bad or sad would happen," "calm," "nice," "funny," "scary," and "happy." Two repeated terms were "like," or "didn't like"; participants used these descriptors to classify music in a few cases.

### Other Descriptors

The other general descriptors were limited to terms such as "same," "different," and "another." Frequently, the participants depicted their own sorting process as binary, either same or different. However, I inquired into the sorting and thought processes during the interviews, and the participants explained in greater detail, at times discussing one category of descriptor in terms of another. I found that Carl, for example, described his own thoughts as he was grouping the music beginning with "different" and "the same" followed by explanations in terms of "rhythm" and "beat." I reminded him of that comment in his interview:

DJ: You said something interesting before. You said, "They're all different but they're all the same in a weird way." You said, "They all have a beat that measures out."

C: Wait . . . they sound all the same once you listen to them, and then it's hard to explain why they're different.

DJ: Um, but they are different?

C: They are different. It's hard to explain them all.

DJ: Was it too hard?

C: No.

DJ: Ok, good. What made them different?

C: The bass.

DJ: Anything else that made them different?

C: The . . . how long the beats were and how long they lasted.

DJ: Ok

C: Like some of the things, how you taught us in class, how it'd be . . .



like Mrs. Jackson taught us, like sorta [he claps twice] counting and clapping the beat, that sorta helped me.

DJ: The rhythm?

C: The rhythm.

DJ: Ok, good. But they sounded the same in a weird way.

C: In a really weird way. That's how I thought them all out.

3/8/02

How Carl "thought out" the music was to recall a musical element and compare the examples. His attention to the rhythm demonstrated his understanding of the underlying pulse and regular cadence, while he also heard rhythmic and stylistic differences among the examples.

### Grouping Patterns

After listening to all fifteen examples as many times as they wanted, the participants sorted the music into groups of their own design. Gill and Fran created eleven different groups. Carl and Emily sorted examples into nine groups while Abby and Haleigh had eight groups. However, Diego and Bethany formed only six groups. Perhaps the smaller number of groups used indicated that they heard many connections among the examples and made conclusions about their similarities. On the other hand, the fewer groups a participant used may also indicate indiscriminate grouping and suggest that Diego and Bethany heard fewer connections among the musical examples.

I found that most of the participants grouped over one-third of the examples similarly, however the participants used different words to describe the same examples. Perhaps the participants grouped these examples together in a similar fashion but for different reasons. I found that three pairs of examples were typically grouped together; "Basin St. Blues" was grouped with "Brass Nation"; Stravinsky's "Rite of Spring," was grouped with the excerpt from "Glassworks"; and Reich's "Violin Phase" was grouped with Fleck's "Blue Mountain Hop." While the instrumental similarity is obvious when hearing these examples, all the participants who grouped the first pair together used both associative and affective descriptors as well as instrumental terms: "Louisiana trip," "brass," "big cities," "happy," "marching," and "jazz." Bethany, Emily, Fran, Gill, and Haleigh, who grouped the second pair together, also used extramusical descriptors: "theme music," "sad," "slow steady jazz," "jazz movie," and "classical." Finally, Carl, Diego, Fran, Gill, and Haleigh who grouped the third pair together, used mainly musical descriptors: "country," "string," "fiddle," and "old days party."

The participants described congruent elements in the music in different terms. While the participants described their listening experiences differently, they indicated a similar listening experience as evidenced by patterns in their groupings. Even though the musical examples did not match stylistically with each other, they did share instrumental similarities (i.e. "Basin St. Blues" and "Brass Nation" are played on brass instruments; Stravinsky's "Rite of Spring," and "Glassworks" have an orchestral sound with varied instrumentation; and Reich's "Violin Phase" and "Blue Mountain Hop" are both played on stringed instruments). This finding suggests that instrumental timbre was one reason for these grouping patterns.

Half of the participants grouped three examples in a category by themselves. The Maori "Action Song" had its own category in most of the participants' groupings; this example was described with a reference to "African voice," or "singing in some language." However, Carl took a different tactic and used the phonetic spelling of the song's lyric "addy," as his original descriptor. Similarly, the excerpt from Enya's "Aithir Ar Neamh" was described as: "a lullaby," "peaceful," "women," "slow not old," and "relaxing women's music." Also, the Renaissance chanson "Tant que vivray" had its own group in most of the categorizations; it was described as: "a play of opera singers," "two people song," "round group," and "choir." Comparing these different descriptions of the same musical examples suggests that the participants heard similar

elements in these examples as articulated by the similarity of their descriptors. The music they heard, however, was different enough from the other examples for them to create a unique group.

### Conclusion

In this study, I sought to examine the musical thought processes involved in comparing, grouping, and describing music from an elementary student's perspective. For this purpose, I designed a musical task in which the participants, all fifth-graders with instrumental music experience, listened to, described, and sorted a variety of musical examples from around the world. I found that four categories of descriptors emerged from the participants' responses: musical terms, affective terms, associative terms, and other descriptors. Additionally, I asked the participants reflective questions during individual interviews to explore the musically based strategies which the participants used as they sorted the examples.

Most often, the participants used standard musical vocabulary terms to describe and categorize the musical examples (e.g. "rests," "quarter notes," "jazzy," and "violin"). Among these descriptors, instrumental terms frequently characterized their responses. The use of musical terms used to describe music was not unexpected; participants used most of the musical terms more than once, suggesting that participants were using a "bank" of terms learned in a musical context. In addition to instrumental terms, stylistic descriptors and elements of the music characterized participants' musical term responses.

I also found that the participants used a substantial number of references to extramusical experiences in their descriptions. The extramusical associations were often based on personal experiences particular to each participant; however, I found four recurring sub-themes (TV and movies, religion/spirituality, kinesthetic actions, and cultures) that were common to many of the participants. Perhaps the participants had some common extramusical experiences suggested by the sub-themes to which they associated the musical examples. Nevertheless, most of the associations in participants' descriptions occurred only once; as expected, extramusical descriptors were specific to each participant's personal life experiences.

Participants used affective descriptors (e.g. "happy," "pretty," and "scary") with less frequency than musical terms or extramusical associations, possibly indicating they thought affective descriptors were less appropriate than other responses. Participants could have also had less emotional involvement in the music as compared to prior knowledge and related experiences. In either case, both the affective and extramusical descriptors were used in a similar manner by the participants; some affective descriptors were individually varied by participant while other descriptors were common among several participants.

Other descriptors completed the four categories of responses used by the participants. The remaining descriptors were used least frequently and revealed that the participants used binary descriptors to characterize the examples; "same," "different," and "another" were commonly used descriptors in this category. The use of these other descriptors indicated thought process of comparing and contrasting the examples in the absence of musical, associative, and affective descriptors.

Finally, during interviews following the sorting process, similar strategies for sorting and describing the examples became evident. I asked the participants about the process of sorting the music in an effort to encourage reflection-in-action, a process particularly appropriate for music listening (Bamberger, 1991). Most of the participants grouped some of the examples similarly, but used different words to describe the same examples. As might be expected given the commonality in participants' musical experience, instrumental timbre played a part in grouping strategies. The variety of descriptors and grouping patterns, however, indicated that instrumental timbre was not an overriding

factor. I noted both similarities and differences in participants' responses, indicated by common grouping patterns and differences in the number of groups.

### Discussion/Implications

This study of students' listening experiences has implications for both practicing music teachers and music researchers. Listening to music is one of the most common activities in the general music classroom (Fiske, 1997). By understanding how students actually listen to music, educators and researchers may design more informed approaches to music appreciation and to music listening. I found evidence suggesting that the extramusical associations the participants used were highly specific and frequently based on their past experiences. While there were many instances of repeated terms in the musical descriptors, the associative and affective descriptors tended to be more singular and varied. From a constructivist frame of reference, the participants understood the music in terms they could articulate and remember. My findings are in agreement with Cutietta's (1985) assertion that personally-based meanings are a way listeners make sense of unfamiliar music.

My findings also concur with the categories of descriptors found in previous investigations of listeners' responses (Flowers, 1984, 1990; Radocy, 1990). For example, musical classifications, extramusical associations, and likes and dislikes were used by similar listeners to describe musical examples. However, I found that the musical descriptors used by the participants were more varied and sophisticated than those found by Cutietta and Thompson (2000) who reported that a similar group of fifth- and sixth-grade students demonstrated a lack of musical terminology and even the most basic terms to describe an excerpt from Mozart's "Symphony No. 38." The greater variety of musical material in my study may have contributed to this difference.

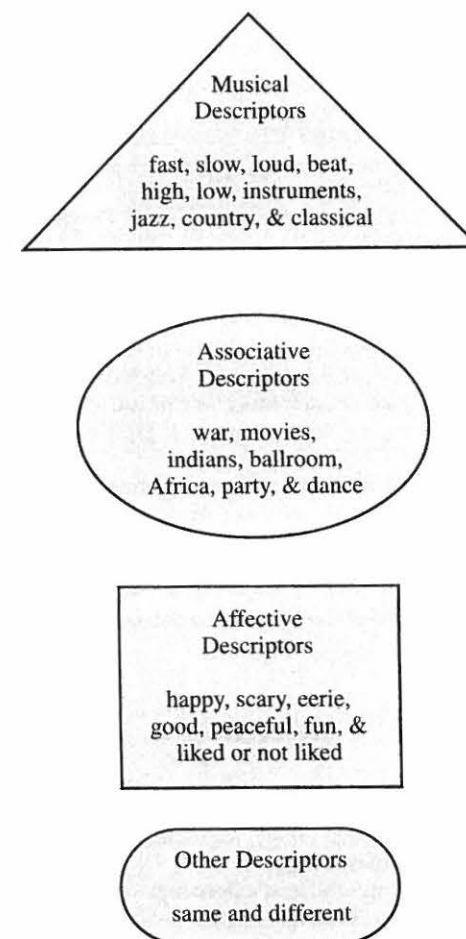
Threats to the credibility of this study included the possibility that the participants attempted to respond with the "right answer," instead of providing me with an authentic view of their thought processes. However, the number and type of associative responses suggest that the participants were not trying to please me directly. Additionally, I took every measure to encourage the participants to use whatever descriptors would help them remember the music. In my interviews, I also emphasized the reasons, not the results, of the musical task. A limitation of this study is its inclusion of only upper-elementary students with instrumental music experience. Finally, studying a larger number of participants could have yielded more data and possibly revealed different categories of responses to music listening. Future research using more in-depth interviews as well as studying more participants with a variety of musical experiences, demographics, and personal backgrounds is necessary for transferability.

Implications of this study for educators include evaluating how students actually listen to music, using in their own words, to provide a more complete understanding of their musical experiences. As Rodriguez and Webster (1997) wrote, "simply asking children *what* and *how* they think about music reveals strategies for musical understanding and valuing" [emphasis in original] (p. 9). As indicated by the findings of this study, students understand music in affective terms and extramusical associations as well as through learned musical vocabulary. Implications for music education include adapting music instruction to reflect these understandings. Instead of teaching music analytically and piecemeal, music teachers could approach music from the students' own lived experiences. By honoring all the categories of responses children have to music, music educators can facilitate more interesting and meaningful listening experiences in the classroom. From a constructivist perspective, students could create and value their own musical reality in the terms they best understand, their own feelings and memories.

During the past twenty years, general music educators have begun to expand their focus beyond musical terms and background knowledge to include musical thinking and problem solving. Continuing research supporting this trend in general music ac-

tivities should include intellectual and emotional responses to increase meaningful music listening (Madsen, 2000). Implications of the current study include supporting problem solving and thoughtful listening skills in music listening and learning tasks. Future research may develop insights into participants' musical thinking as demonstrated by their listening experiences and strategies. Regardless of the variety in listeners' lived experiences, there may be common aspects of the musical experience that rely on memory and emotions. Musical thought, then, may provide a link between cognition and feeling. Since thoughts are not emotion-free nor are emotions thoughtless (Dressel, 1988), both affect and cognition may play a part in music listening as evidenced by participants' responses. Implications for thinking and music listening include promoting higher-order thinking skills such as comparing and contrasting musical examples based on both learned vocabulary and extramusical references. Developing future studies based on rich qualitative data might provide valuable insights into the nature of musical thinking.

### APPENDIX A: Coding Display with Examples



## APPENDIX B: Musical References

### Practice Musical Examples:

- Dutoit, C. (1987). Jupiter. On *The Planets* [CD]. New York, NY: London Records.
- Massenburg, G. and Payne, B. (producers) (1988). Listen to Your Heart. On *Little Feat: Let It Roll* [CD]. USA: Warner Brothers Records.
- Vollenweider, A. (1993). The Years in the Forest. On *Eolian Minstrel* [CD]. New York, NY: SBK Records.

### Musical Examples:

- Blumenfeld, L. (Ed.) (1993). He Toa Takitini/Ka Tohia Atu Koe/Ki Okoiki—Action Songs and Wardance [Maori People]. On *Voices of Forgotten Worlds* [CD]. Rosily, NY: Ellipsis Arts.
- Blumenfeld, L. (Ed.) (1993). Sote Tulifurahia Kama Siku Ya Arusi—Independence Song [Wagogo People]. On *Voices of Forgotten Worlds* [CD]. Rosily, NY: Ellipsis Arts.
- Blumenfeld, L. (Ed.) (1993). Tuva Kozhangnar—Throat-Singing [Tuvians]. On *Voices of Forgotten Worlds* [CD]. Rosily, NY: Ellipsis Arts.
- Davis, M. (2000). Brass Nation. On *Brass Nation* [CD]. USA: Hip-Bone Music.
- Enya. (1995). Athair Ar Neamh. On *The Memory of Trees* [CD]. Burbank, CA: Reprise Records.
- Fleck, B. (1999). Blue Mountain Hop. On *The Bluegrass Sessions—Tales from the Acoustic Planet Vol. 2* [CD]. USA: Warner Brothers.
- Glass, P. (1982). Island. On *Glassworks* [CD]. New York, New York: CBS Records.
- Joel, B. (1989). The Downeaster “Alexa.” On *Storm Front* [CD]. New York, NY: CBS Records.
- Mallinson, J. (producer). (1987). Beale Street Blues. On *Canadian Brass—Basin Street* [CD]. New York, NY: CBS Records.
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- Palisca, C. (Ed.) (1980). Igor Stravinsky: Le Sacre du printemps “Danse des adolescents.” On *Concise Norton Recorded Anthology of Western Music* [CD]. New York, NY: W. W. Norton and Company.
- Palisca, C. (Ed.) (1980). Steve Reich: Violin Phase. On *Concise Norton Recorded Anthology of Western Music* [CD]. New York, NY: W. W. Norton and Company.
- Whelan, B. (1995). American Wake/The Nova Scotia Set. On *Riverdance* [CD]. USA: Celtic Heartbeat Ltd.

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